

CLAIM(S)

What is claimed is:

1. A bulk unloading system comprising:

5 (a) a bulk container removably mounted on a platform, the container having surrounding walls and a floor mounted on a structural frame and two ends, a front end and a rear end, wherein the front end is closed and rear end is least partially open; and the platform having  
10 a means of tilting the container at an angle from about 0 to at least 40 degrees; and

(b) a manifold having inlet and discharge sections, the manifold being mounted by support member connecting to a location selected from the group  
15 consisting of the rear end of the container and the platform to connect the inlet of the manifold to rear end of the container, wherein at least a portion of the manifold is lined with a pneumatic conditioning membrane and wherein on the manifold is a service port by which  
20 gas service is supplied to the pneumatic conditioning membrane in order to enhance the flow of the bulk powder in the manifold and throughout the powder's entire mass.

2. The system of claim 1 wherein the inlet section  
25 of the manifold is joined to a support member.

3. The system of claim 2 wherein the support member is sized to cover fully the rear end of the container.

30 4. The system of claim 1 wherein the means of gas supply is selected from the group consisting of a portable compressor, fixed compressor, and a source of compressed gas.

5. The system of claim 1 wherein the manifold is  
removably mounted to the rear end of the container.

5 6. The system of claim 1 wherein the manifold is  
removably mounted to the platform.

7. The system of claim 1 wherein the pneumatic  
conditioning membrane is formed from a microporous  
10 membrane material.

8. The system of claim 1 wherein the manifold is  
hopper-shaped.

15 9. The system of claim 1 further comprising a  
standard flexible plastic liner removable, flexible liner  
within the container where the bulk powder is sealed  
being supported by a cardboard bulkhead.

20 10. The system of claim 1 further comprising  
vibrators mounted on the container floor structural frame  
channels.

11. The system of claim 10 wherein at least 3  
25 vibrators are mounted on the container floor structural  
frame; 2 of the vibrators mounted as a pair, one directly  
opposite the other, and the third vibrator mounted on a  
cross member of the structural frame along the container  
floor center line at a location between the front end of  
30 the container and the pair of vibrators.

12. The system of claim 10 wherein there are 5  
vibrators mounted on the container floor structural  
frame, the vibrators mounted so that there is a first

pair of vibrators at the rear end of the container, a second pair of vibrators mounted approximately halfway between the front end and the rear end of the container,  
5 and the fifth vibrator mounted on a cross member of the structural frame along the container floor center line at a location between the front end of the container and the second pair of vibrators.

10 13. The system of claim 1 wherein the manifold is rigidly mounted to the platform.

14. The manifold of claim 1 having a support member selected from the group consisting of 9, 12, 13, and 14.

15 15. The manifold of claim 1 wherein it is connected by a flange to the rear end of the container.

16. The manifold of claim 1 wherein it is attached  
20 by rigging points in the four corners of the container.

17. The manifold of claim 1 wherein the manifold is built into a tilt stand.